

IN THE CLAIMS:

1. An isolated polynucleotide which is selectively expressed in prostate, which is:
PR33a as set forth in SEQ ID NO. 1, PR33b as set forth in SEQ ID NO. 3, PRB008
as set forth in SEQ ID NO. 4, a polynucleotide having 95% sequence identity thereto, or a
complement thereto.
2. An isolated polynucleotide of claim 1, which is PR33a as set forth in SEQ ID NO. 1.
3. An isolated polynucleotide of claim 1, which is PR33b as set forth in SEQ ID NO. 3.
4. An isolated polynucleotide of claim 1, which is PRB008 as set forth in SEQ ID NO. 4.
5. An isolated polynucleotide probe for prostate, comprising:
SEQ ID NOS 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, or a complement thereto.
6. An isolated probe of claim 5, which consists essentially of SEQ ID NOS 7, 8, 9, 10,
11, 12, 13, 14, 15, 16, or a complement thereto.
7. A method of detecting prostate tissue in a sample comprising nucleic acid, comprising:
contacting said sample with a polynucleotide probe under conditions effective for said
probe to hybridize specifically to a nucleic acid of claim 1 in said sample, and
detecting the presence or absence of probe hybridized to said nucleic acid in said
sample,
wherein said probe is a polynucleotide which is PR33a as set forth in SEQ ID NO. 1,
PR33b as set forth in SEQ ID NO. 3, PRB008 as set forth in SEQ ID NO. 4, complements
thereto, a polynucleotide having at least 95% sequence identity thereto, or effective specific
fragments thereof.
8. A method of claim 7, wherein said probe is a contiguous sequence of at least 8
nucleotides selected from the sequence set forth in SEQ ID NOS. 1, 3, 4, or complements
thereto.

9. A method of claim 7, wherein said probe is selected from SEQ ID NOS. 7-16, or a complement thereto.

10. A method of claim 7, wherein said detecting is performed by Northern blot analysis, polymerase chain reaction (PCR), reverse transcriptase PCR, RACE PCR, or *in situ* hybridization.

11. A method of claim 7, wherein said sample is blood, normal prostate, or prostate cancer.

12. A method of retrieving prostate-specific gene sequences from a computer-readable medium, comprising:

selecting a gene expression profile that specifies that said gene is selectively expressed in prostate, and

retrieving prostate-specific gene sequences, where the gene sequences comprise the sequences of claim 1.

13. A method of claim 12, wherein said gene has the nucleotide sequence set forth in SEQ ID NOS. 1, 3, 4, or complements thereto.

14. A method of identifying specific-binding partners for prostate-specific polynucleotides comprising:

contacting a PR33a, PR33b, or PRB008 polynucleotide of claim 1 with a sample comprising a specific-binding partner under conditions effective for said partner to bind to polynucleotide, and

detecting the presence or absence of binding between said polynucleotide and said specific-binding partner.

15. A method of claim 14, wherein said detecting is performed using a gel band-shift assay.

16. A computer-readable storage medium, consisting essentially of, polynucleotide sequences of claim 1.

5 17. A storage medium of claim 16, wherein said gene has a nucleotide sequence set forth in SEQ ID NO. 1, 3, or 4.

18✓ An array of polynucleotide probes, comprising:

nucleic acid probes selective for prostate-selective genes comprising (a) PR33a or

10 PR33b, and (b) PRB008,

wherein said probes are selected from PR33a as set forth in SEQ ID NO. 1, PR33b as set forth in SEQ ID NO. 3, PRB008 as set forth in SEQ ID NO. 4, or complements thereto, and said probe is a contiguous sequence of at least 8 nucleotides.

15 19✓ A recombinant polynucleotide molecule comprising, a promoter sequence of SEQ ID NO 6.

20 20. A recombinant polynucleotide molecule of claim 19, further comprising a coding sequence operably linked to said promoter.